

**CLAIM AMENDMENTS**

1-4. (Cancelled)

5. (Currently Amended) A method of processing burst information in a transmission link, comprising the steps of:

receiving a sampled waveform containing a record of symbols imposed on a carrier signal;

determining symbol phase of said record of symbols utilizing one or more metrics;

processing said sample waveform to remove said carrier signal;

calculating phase ambiguity of the burst information; and

indexing an arrival time of the burst information;

wherein said symbol phase is determined with a 5-point correlation using sinusoidal functions.

6-22. (Cancelled)

23. (Currently Amended) An apparatus for processing burst information in a transmission link, comprising:

a waveform sampler for sampling a received waveform imposed on a carrier signal, said sampled waveform having a record of symbols;

a determinator for determining symbol phase of said record of symbols utilizing one or more metrics;

a processor for processing said sampled waveform to remove said carrier signal;

a resolver for determining phase ambiguity of the burst information; and  
a detector for detecting a time of arrival of the burst information;  
wherein said symbol phase is determined with a 5-point correlation using sinusoidal functions.

24-38. (Cancelled)

39. (Previously Presented) A method of processing burst information in a transmission link, comprising the steps of:

receiving a sampled waveform containing a record of symbols imposed on a carrier signal;

determining symbol timing of said record of symbols utilizing one or more metrics;

processing said sample waveform to remove said carrier signal by:

estimating residual carrier phase and frequency; and

down-converting to remove said carrier signal; and

determining phase ambiguity and burst arrival time by detecting a unique pattern of symbols word in said record of symbols;

wherein symbol phase of said symbol timing is determined with a 5-point correlation using sinusoidal functions.

40-49. (Cancelled)

50. (Previously Presented) An apparatus for processing burst information in a transmission link, comprising:

a waveform sampler for sampling a received waveform imposed on a carrier signal, said sampled waveform having a record of symbols;

a determinator for determining symbol timing of said record of symbols utilizing one or more metrics;

a processor for processing said sampled waveform in phase and frequency to remove said carrier signal;

a resolver for resolver phase ambiguity of the burst information; and

a detector for detecting a time of arrival of the burst information;

wherein symbol phase of said symbol timing is determined with a 5-point correlation using sinusoidal functions.

51-62. (Cancelled)

63. (Previously Presented) A method of processing burst information in a transmission link, comprising the steps of:

receiving a sampled waveform containing a record of symbols imposed on a carrier signal;

determining symbol timing of said record of symbols utilizing one or more metrics;

processing said sample waveform in phase and frequency to remove said carrier signal;

calculating phase ambiguity of the burst information; and

indexing an arrival time of the burst information;

wherein symbol phase of said symbol timing is determined in the step of determining with a 5-point correlation using sinusoidal functions.

64-80. (Cancelled)

81. (Previously Presented) A method of processing burst information in a transmission link, comprising the steps of:

receiving a sampled waveform containing a record of symbols imposed on a carrier signal;

determining symbol timing of said record of symbols utilizing one or more metrics;

processing said sample waveform to remove said carrier signal; and

calculating phase ambiguity and time of arrival of the burst information by midamble detection;

wherein symbol phase of said symbol timing is determined in the step of determining with a 5-point correlation using sinusoidal functions.

82-93. (Cancelled)